



ABSTRACT

Slurries containing tri-or polyvalent cations are used for investment casting and making molds as well as core coatings. These slurries are aqueous or alcohol-based containing a mineral component and a polyanionic binder, where at least one of the continuous phase or mineral component contains trivalent or polyvalent cations or cations that are converted into trivalent or polyvalent cations during use. The cationic component is selected from a group consisting of at least one of the metals iron or aluminum. The polyanionic component contains at least one of the group consisting of colloidal silica or one or more water-soluble organic polymers.